

CLAIMS

1. A router for coupling into a computer network along which network traffic flows in a form of packets, wherein the network comprises a management system, the router comprising:

5 at least one monitoring circuit coupled to the network, wherein the at least one monitoring circuit is operable to examine packets communicated to the router and to provide information associated with selected ones of the examined packets;

circuitry for processing the provided information;

circuitry for including the processed information into one or more packets; and

10 circuitry for transmitting the one or more packets along the network to at least one node coupled to the network, wherein the at least one node is outside of the management system.

2. The router of claim 1:

wherein the management system comprises a plurality of nodes operable to communicate according to a network management system protocol.

3. The router of claim 2 wherein the network management system protocol is selected from a group consisting of a Simple Network Management Protocol, a Common Management Information Protocol, and a Common Object Request Broker Architecture protocol.

4. The router of claim 2 wherein the management system comprises a network management system/element management system.

5. The router of claim 1:

wherein a set of transmitted one or more packets correspond to a set of packets received at the router; and

5 wherein the circuitry for transmitting is for transmitting the one or more packets within 60 seconds of when the router receives the set of packets received at the router.

6. The router of claim 1:

wherein a set of transmitted one or more packets correspond to a set of packets received at the router; and

5 wherein the circuitry for transmitting is for transmitting the one or more packets within five minutes of when the router receives the set of packets received at the router.

7. The router of claim 1 wherein the circuitry for transmitting is further for transmitting the one or more packets along the network to at least one node that is part of the management system.

8. The router of claim 1:

wherein the circuitry for transmitting is further for transmitting the one or more packets along the network to a plurality of nodes coupled to the network; and

wherein the plurality of nodes are outside of the management system.

9. The router of claim 1, and further comprising:

wherein the circuitry for transmitting is for transmitting a first set of the one or more packets along the network to a first respective node coupled to the network;

5 wherein the circuitry for transmitting is for transmitting a second set of the one or more packets along the network to a second respective node coupled to the network; and

wherein the first respective node and the second respective node are outside of the management system.

10. The router of claim 9:

wherein the first set of the one or more packets corresponds to a first type of analysis performed by the circuitry for processing the provided information; and

5 wherein the second set of the one or more packets corresponds to a second type of analysis, different from the first type of analysis, performed by the circuitry for processing the provided information.

11. The router of claim 1:

wherein the at least one monitoring circuit is operable to examine packets in response to a set of criteria; and

5 wherein the selected ones of the examined packets correspond to packets that satisfy the set of criteria.

12. The router of claim 1 wherein the network comprises the global Internet.

13. The router of claim 1 wherein the network is selected from a group consisting of a cell-based network and a packet-based network.

14. The router of claim 1 wherein the provided information comprises information copied from the examined packets.

15. The router of claim 1 wherein the provided information comprises information not included in the examined packets.

16. The router of claim 1 wherein the provided information is selected from the set consisting of packet time of arrival data, port arrival data, number of discarded packets, error packets, port utilization, and buffer utilization.

17. The router of claim 1 and further comprising a plurality of routers, and wherein each router in the plurality of routers is for coupling into the computer network, and wherein each router of the plurality of routers comprises:

5 at least one monitoring circuit coupled to the network, wherein the at least one monitoring circuit is operable to examine packets communicated to the router and to provide information associated with selected ones of the examined packets;

circuitry for processing the provided information;

circuitry for including the processed information into one or more packets; and

10 circuitry for transmitting the one or more packets of a respective router along the network to at least one node coupled to the network, wherein the at least one node is outside of the management system.

18. The router of claim 17 wherein at least two of the routers in the plurality of routers are operable to include respective processed information into a respective set of one or more packets for transmission to a same destination node.

19. The router of claim 18 wherein the same destination node is outside of the management system.

20. A method of operating a router that is coupled into a computer network along which network traffic flows in a form of packets, wherein the network comprises a management system, the method comprising:

5 operating a monitoring circuit to examine packets communicated to the router and
to provide information associated with selected ones of the examined packets;
processing the provided information;
including the processed information into of one or more packets; and
transmitting the one or more packets along the network to at least one node
coupled to the network, wherein the at least one node is outside of the management
10 system.
